

NAME: KEY

Chemistry 150
Quiz 4
October 9, 2003

1. Calculate the formula weight of P₄. (2 points)

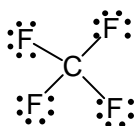
$$P = 30.97 \text{ g/mol } 4 \times 30.97 \text{ g/mol} = 123.88 \text{ g/mol}$$

2. The synthesis of urea, a common fertilizer, is described by the following equation:

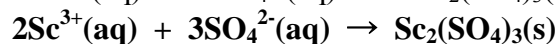
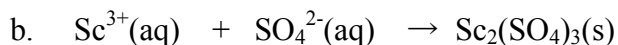
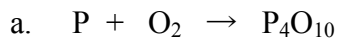


When the equation above is properly balanced with the smallest whole numbers, the respective coefficients are (1 point, circle one answer only):

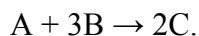
- a. 2, 3, 2, 4
b. **1, 2, 1, 1**
c. 2, 4, 2, 2
d. 1, 4, 2, 2
e. 2, 3, 2, 3
3. Draw the Lewis dot structure of the molecule CF₄. (4 points)



4. Balance the following equations (1 point each):



5. Given the balanced equation:



The molar mass of C is 40.0 grams. If one **mole** of A produces 20.0 grams of C, what is the percent yield of the reaction? (1 point, circle one answer only)

- a. 100%
b. 50%
c. **25%**
d. 10%
e. 1.0%

POINTS: 10 (of 10)